

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant	:	Eric A. Benson
Appl. No.	:	10/694,509
Filed	:	October 27, 2003
For	:	USE OF BROWSER COOKIES TO STORE STRUCTURED DATA
Examiner	:	Jay A. Morrison
Confirmation No.	:	2671

REPLY BRIEF

Commissioner for Patents
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This Reply Brief is responsive to the Examiner's Answer issued on July 3, 2007, and supplements the arguments made in the Appeal Brief. All of the claims discussed herein stand rejected as anticipated by Durham (U.S. Pat. 6,330,566).

Claim 1

In connection with Claim 1, the Examiner's Answer construes "schema data" and "data structure" so as to support the anticipation rejection. For the reasons explained below, Appellant respectfully submits that the anticipation rejection of Claim 1 is based on improper constructions of these terms.

"Schema Data"

The Examiner's Answer asserts that "schema data," as used in Claim 1, means the "content structure of data." Examiner's Answer at page 6, lines 3-5. Based on this construction, the Examiner's Answer concludes that "schema data" as recited in Claim 1 encompasses the executable code (instructions) used in Durham to decode cookies. Appellant respectfully disagrees.

As stated in *Phillips v. AWH Corporation*, 415 F.3d 1303, 75 USPQ2D 1321 (Fed. Cir. 2005), claims terms are properly construed as read by a person of ordinary skill in the art “not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” In this regard, “the context in which a term is used in the asserted claim can be highly instructive.” *Id.* at 1314.

In the present case, Claim 1 makes a distinction between “schema data” and the “conversion component” that uses this schema data. For example, the claim recites “a conversion component executed by the server, *said conversion component configured to use the schema data* to identify and decode the data structures encoded within cookies” (emphasis added). This language makes clear that the recited “schema data” is distinct from the “conversion component,” or executable program code, that is executed by the server.

This construction is also supported by the specification. For example, the specification discloses a schema file containing data (as opposed to executable instructions) that specifies the types of data structures selected to encode in cookies. *See, e.g.*, Figure 1, element 52; and paragraphs 0019, 0020 and 0023-0030 of the present application. (Paragraphs 0019 and 0042 also make clear that this schema data need not be stored as “file.”) The data contained in the schema file is used by an executable cookie-to-host conversion module 50B to identify and decode the data structures encoded within received cookies. *See, e.g.*, Figures 1 and 3; and paragraphs 0020, 0021 and 0038-0040. Thus, in the embodiments described in the specification, the schema data is separate from the executable conversion code used to identify and decode the data structures.

The foregoing construction of “schema data” is consistent with the distinction commonly made in the programming field between data and executable program code. *See, e.g.*, Webopedia.com, definition 1 for “data,” which states in-part that: “All software is divided into two general categories: *data* and *programs*. Programs are collections of instructions for manipulating data.”

In view of the foregoing, Appellant submits that Durham does not disclose the claimed combination of “schema data” and a “conversion component configured to use the schema data to identify and decode the data structures encoded within cookies.” In contrast, and as discussed in the Appeal Brief, Durham discloses a system in which the schema is fully specified by, or “hard coded” in, the executable program code used to decode the received cookies. Nothing in Durham or the Examiner’s Answer suggests otherwise. Indeed, with Durham’s approach, a programmer wishing to modify the schema used to generate and decode cookies would apparently have to write new executable code.

“Data Structure”

In connection with the term “data structure,” the Examiner’s Answer points to the following statement at paragraph 0007 of the specification: “The data structures may contain a variety of different types of data elements, including N-bit integers and other non-character elements.” Examiner’s Answer at page 16, lines 5-8. Based on this statement, the Examiner’s Answer concludes that the preferences or preference bits encoded into cookies by Durham represent “data structures” as claimed. Examiner’s Answer at page 17, first full paragraph. Appellant respectfully disagrees.

The referenced portion of the specification never states that the data structures are or can be individual data elements. Rather, it states that the data structures may *contain* different types of data elements. This use of “contain” implies that “data structure” refers to a set or arrangement of data elements, as opposed to the individual data elements themselves. (The specification also makes clear that the recited “data structures” are not merely arrangements of data elements formed as part of the cookie generation process.)

This construction is consistent with paragraph 0016 of the specification, which gives the following examples of types of data structures that may be encoded in cookies: lists, tables, arrays, variables, and records. In addition, this construction is consistent with paragraph 0024, which discloses how a data structure may be defined in a schema file. Appellant’s construction is also consistent with the common usage of “data structure” to refer to a set of data elements arranged according to an organizational scheme.

In view of the foregoing, Appellant submits that the individual preferences or preference bits encoded into cookies by Durham are not “data structures” as recited by Claim 1. Thus, Durham does not disclose a conversion component that is configured to “identify and decode *the data structures encoded within cookies* received from user computers” as recited in Claim 1 (emphasis added).

The various other issues raised in the Examiner’s Answer in connection with Claim 1 are fully addressed in the Appeal Brief.

Dependent Claims 2, 4, 5, 6, 7, 9, 10, 22 24, 31 and 42

The analysis of Claims 2, 4, 5, 6, 7, 9, 10, 22 24, 31 and 42 in the Examiner’s Answer relies on the same improper construction of “data structure” and, in some cases, “schema data.” Based on the proper constructions set forth above, Appellant submits that Durham does not disclose the limitations added by these claims.

With respect to Claim 7, the Examiner’s Answer also improperly relies on Durham’s teaching of a version number that is added to the cookies. Examiner’s Answer at page 21, first full paragraph, citing column 10, lines 12-16 of Durham. Indeed, nothing in Durham suggests that this version number indicates, for a given data structure, “a range of schema versions for which the data structure is valid” as required by Claim 7.

In connection with Claims 9, 10 and 22, the Examiner’s Answer also improperly treats Durham’s disclose at column 16, lines 26-31 as a teaching of the selective decoding of encoded data structures. While the referenced portion of Durham may suggest that users can vary the personalization preferences that are encoded in the cookies, nothing in Durham suggests a determination of which of the data structures encoded in a received cookie should be decoded.

Independent Claim 18

With respect to Claim 18, Appellant respectfully submits that the analysis in the Examiner’s Answer is again based on an improper construction of “data structure.” Specifically, the Examiner’s Answer apparently treats the individual preferences or preference bits of Durham as data structures. Examiner’s Answer at page 23, last

paragraph, referring back to the discussion of Claim 1. As discussed above, such a construction is improper.

Under a proper construction of “data structure,” Durham does not disclose all of the limitations of the claim. For example, Durham does not disclose “receiving, at a server, cookie data that has a data structure encoded therein,” and does not disclose “decoding the encoded data structure.”

The rejection of Claim 18 is also improper because Durham does not disclose the following feature: “the validity of the data structure is determined using information that identifies types of encoded data structures that are currently valid.” This is true even if, *arguendo*, the individual preferences or preference bits of Durham are treated as the recited “data structures.” In connection with this portion of the claim, the Examiner’s Answer points to Durham’s use of a version number that allows the system “to know when the client has become out of date,” and “to know what cookie format to expect.” Examiner’s Answer at page 23, last paragraph, citing column 10, lines 12-16 of Durham. Nothing in the referenced portion of Durham, however, suggests the use of “information that identifies types of encoded data structures that are currently valid.”

Independent Claim 28

With respect to Claim 28, Appellant respectfully submits that the analysis in the Examiner’s Answer is again based on an improper construction of “data structure.” Specifically, the Examiner’s Answer construes this term to encompass the individual preferences or preference bits associated with a user. As discussed above in connection with Claim 1, such a construction is improper.

Under a proper construction of “data structure,” Durham does not disclose all of the limitations of the claim. For example, Durham does not disclose “identifying a set of data structures to be encoded within the cookie data,” and does not disclose “encoding the set of data structures within the cookie data.”

The rejection of Claim 28 is also improper because Durham does not make use of “schema data.” Instead, Durham uses an approach in which the schema is embodied

within the executable program instructions. Such instructions do not represent “schema data” as claimed.

Dependent Claim 35

Claim 35 depends from Claim 28, and adds the following: “wherein the method is performed in an off-line mode to reduce a delay experienced by a user.” In connection with this claim, the Examiner’s Answer asserts that Durham’s process of generating the cookie is likely performed off-line because Internet communications between a client and server commonly occur in short bursts. Examiner’s Answer beginning at page 25, last paragraph. Nothing in Durham, however, supports this conclusion. To the contrary, in Durham’s process, the cookie is apparently generated when the user submits a completed preferences-entry page, and the cookie is apparently returned with the server response to this submission. See, e.g., Figure 2, and column 10, lines 6-8. Such a mode of operation is not an “off-line mode” as claimed, and does not “reduce a delay experienced by the user.”

Independent Claim 39

Appellant respectfully submits that the analysis of Claim 39 in the Examiner’s Answer is based on improper constructions of both “data structure” and “schema data.” As discussed above in connection with Claim 1, the term “data structure” does not encompass an individual preference or preference bit as disclosed in Durham.

With respect to “schema data,” Claim 39 states that the schema data specifies schemas “used by executable software to (a) encode data structures within cookies for storage on user computers, and (b) decode said cookies to extract the data structures.” This language makes clear that the recited “schema data” is distinct from the “executable software” (i.e., the instructions that are executed) used for encoding and decoding. This construction is consistent with the common usage of “data” in the programming field to refer to information other than executable instructions. See discussion of Claim 1 above.

Under a proper construction of “data structure” and “schema data,” Durham does not disclose all of the limitations of Claim 39. For example, Durham does not disclose “storing schema data on at least one server computer of a web site system, said schema

data specifying schemas used by executable software to (a) encode data structures within cookies for storage on user computers, and (b) decode said cookies.” In addition, Durham does not disclose “modifying the schema data over time to add data structures to, and remove data structures from, a set of data structures encoded within cookies by the executable software.”

In connection with this claim, the Examiner’s Answer refers to Durham’s use of a version number. Examiner’s Answer at pages 26 and 27, citing column 4, lines 40-48 and column 10, lines 12-16 of Durham. This use of a version number, however, does not imply the use of schema data as claimed, and does not suggest the encoding of data structures in cookies.

Dependent Claim 40

Claim 40 depends from Claim 39 and adds the following: “the schema data is modified according to a set of rules to enable the executable software to decode cookies encoded using both past and present schemas.” In connection with this claim, the Examiner’s Answer points again to Durham’s use of version numbers to provide version control. Examiner’s Answer at page 27, citing column 4, lines 40-48 of Durham. While this disclosure may suggest the modification of the schemas used to generate cookies, it does not suggest the use of schema data that “is modified according to a set of rules to enable the executable software to decode cookies encoded using both past and present schemas.” This is true even if, *arguendo*, Durham’s executable code is treated as the recited “schema data.” Indeed, with Durham’s approach, there is apparently no need for such rules since different sequences of executable code are apparently written for handling different cookie versions.

Dependent Claim 41

Claim 41 depends from Claim 40 and adds that “the rules are enforced by a management layer.” The Examiner’s Answer asserts that Durham’s version numbers can be considered the “management layer” of Claim 41. Nothing in Durham, however, suggest that the version numbers are used to enforce rules that govern the modification of schema data.

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Conclusion

For the reasons set forth above, and the reasons explained in the Appeal Brief, Appellant respectfully submits that the rejections of Claims 1-42 are improper, and requests that these rejections be reversed.

Respectfully submitted,

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